

List of All Chemicals

P *Monarda punctata* (Lamiaceae)

Common name(s)

Horsemint

How used

GRAS

*Unless otherwise noted all references are to Duke, James A. 1992. Handbook of phytochemical constituents of GRAS herbs and other economic plants. Boca Raton, FL. CRC Press.

| Chemical | Plant Part | Low PPM | High PPM | StdDev | *Reference |
|--|------------|--|----------|--------|--|
| 1,8-CINEOLE | Plant | 373.0 | 6864.0 | 1.37 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| Activities (67) | | | | | |
| (-)Chronotropic 87 nl/ml | | Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin. | | | |
| (-)Inotropic 87 nl/ml | | Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin. | | | |
| Acaricide LC100=6 uM | | | | | |
| Allelopathic | | | | | |
| Allergenic | | | | | |
| Anesthetic | | | | | |
| Anthelmintic | | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. | | | |
| Antiacetylcholinesterase IC50=41 ug/ml | | | | | |
| Antiallergic | | J. Food Hyg. Soc. Jap. 33(6): 569. | | | |
| Antibacterial 50 ppm | | | | | |
| Antibronchitic | | | | | |
| Anticariogenic | | | | | |
| Anticatarrh | | Martindale's 29th | | | |
| Anticholinesterase IC50=50-70 | | | | | |
| Antifatigue | | | | | |
| Antihalitotic | | American Health, 12(4): 17, 1993. | | | |
| Antiinflammatory | | | | | |
| Antilaryngitic | | | | | |
| Antinociceptive | | | | | |
| Antipharyngitic | | | | | |
| Antiplaque | | | | | |
| Antirheumatic | | | | | |
| Antirhinitic | | | | | |
| Antiseptic | | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. | | | |
| Antisinusitic | | | | | |
| Antispasmodic | | | | | |
| Antistaphylococcic 50 ppm | | | | | |
| Antitussive | | | | | |
| Antiulcer | | | | | |
| CNS-Stimulant | | | | | |
| Candidicide | | | | | |
| Carcinogenic | | Zebovitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253. | | | |
| Choleretic | | | | | |
| Convulsant | | | | | |
| Counterirritant | | Martindale's 29th | | | |
| Cytochrome-P450-Inducer | | | | | |
| Decongestant | | | | | |
| Degranulant 0.3 ul/ml | | | | | |
| Dentifrice | | Martindale's 29th | | | |
| Edemagenic inj | | | | | |
| Expectorant | | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. | | | |
| FLavor FEMA 1-200 | | Aloe Research Council - Duke write up of non-peer reviewd book by Coats and draft by Henry | | | |

| | |
|----------------------------------|--|
| Gastroprotective | |
| Gram(+)icide | |
| Gram(-)icide | |
| Hepatotoxic | |
| Herbicide IC50=78 uM | Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp. |
| Hypotensive | |
| Inflammatory inj | |
| Insectifuge | |
| Irritant | Rinzler, C. A. 1990. The Complete Book of Herbs, Spices and Condiments. Facts on File, New York. 199 pp. |
| Myorelaxant | Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp. |
| Nematicide | Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp. |
| Neurotoxic | |
| P450-Inducer | |
| Pediculicide 2.3 x pyrethrin | |
| Perfume | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Pesticide | |
| Rubefacient | Martindale's 29th |
| Secretogogue | |
| Sedative | |
| Spasmogenic | |
| Surfactant | |
| Testosterone-Hydroxylase-Inducer | |
| Transdermal | |
| Trichomonicide LD100=1,000 ug/ml | |

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|----------------------|-------|------|-------|------|--|
| 2-METHYL-2-HEPTANONE | Plant | -- | -- | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 3-OCTANOL | Plant | 25.0 | 801.0 | 1.01 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |

Activities (2)

| | |
|-------------|---|
| FLavor FEMA | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Perfumery | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |

| | | | | | |
|-----------------|-------|------|--------|------|--|
| 3-OCTYL-ACETATE | Plant | 34.0 | 825.0 | 2.5 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| ALPHA-PINENE | Plant | 40.0 | 1974.0 | 0.92 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |

Activities (28)

| | |
|----------------------------------|--|
| Allelochemical | |
| Allergenic | |
| Antiacne | |
| Antibacterial | |
| Antifeedant | |
| Antiflu | Economic & Medicinal Plant Research, 5: 195. |
| Antiinflammatory | 500 mg/kg |
| Antipneumonic | |
| Antiseptic | |
| Antispasmodic | |
| Antistaphylococcic | |
| Antiviral | Economic & Medicinal Plant Research, 5: 195. |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Coleoptophile | |
| Expectorant | Michael Castleman 1991. The Healing Herbs. Rodale Press, Emmaus, PA 436 pp. |
| FLavor FEMA 15-150 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Herbicide IC50=30 uM | Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp. |
| Insecticide 0.82 uM/fly | |
| Insectifuge 50 ppm | |
| Insectiphile | J. Stored. Prod. Res., 22:141, 1986. |
| Irritant | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| P450-2B1-Inhibitor IC50=0.087 uM | |
| Perfumery | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Pesticide | |
| Sedative | Lawrence Review of Natural Products, Jun-90. |

Tranquilizer
Transdermal

Lawrence Review of Natural Products, Jun-90.

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|-----------------|-------|-------|--------|------|--|
| ALPHA-TERPINENE | Plant | 550.0 | 1740.0 | 2.12 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
|-----------------|-------|-------|--------|------|--|

Activities (13)

| | |
|---|--|
| ACE-Inhibitor 100 ug/ml (weak activity) | |
| Acaricide | |
| Aldose-Reductase-Inhibitor 100 ug/ml | Okamura, K., Iwakami, S., Matsunaga, T. 1992. Biological Activity of Monoterpenes from Trees. Toyama-Ken Yakuji Kenkyusho Nenpo, (20): 95-101. |
| Antiacetylcholinesterase IC50=1.0 mM | |
| Antinitrosaminic | |
| Antispasmodic | |
| FLavor FEMA 1-40 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Insecticide 0.86 uM/fly | |
| Insectifuge | |
| P450-2B1-Inhibitor IC50=0.76 uM | |
| Perfumery | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Pesticide | |
| Spasmogenic | |

| | | | | | |
|-----------------|-------|-----|--------|------|--|
| ALPHA-TERPINEOL | Plant | 8.0 | 4518.0 | 3.02 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
|-----------------|-------|-----|--------|------|--|

Activities (23)

| | |
|---|---|
| ACE-Inhibitor 100 ug/ml (weak activity) | |
| Aldose-Reductase-Inhibitor 100 ug/ml | Okamura, K., Iwakami, S., Matsunaga, T. 1992. Biological Activity of Monoterpenes from Trees. Toyama-Ken Yakuji Kenkyusho Nenpo, (20): 95-101. |
| Allelopathic | Wright,C.W.(Ed)2002.Medicinal&Aromatic Plants-Industrial Profiles.Artemisia.344pp.Maffei,M.(Ed)2002.Vetiveria.The Genus Vetiveria.Taylor&Francis.NY,NY.191pp.Southwell,I.,Lowe,R.(Eds)1999.Tea Tree.The Genus Melaleuca.Harwood Acad.Pub.Amsterdam,Netherlands. |
| Antiacne | |
| Antibacterial MIC=800-1,600 ug/ml | Muroi, H. and Kubo, I. 1993. Combination Effects of Antibacterial Compounds in Green Tea Flavor against Streptococcus mutans. J. Agric. Food Chem. 41: 1102-1105. |
| Anticancer | Joseph, J., Nadeau, D. and Underwood, A. 2001. The Color Code. Hyperion, NY. |
| Anticariogenic MIC=800-1,600 ug/ml | Muroi, H. and Kubo, I. 1993. Combination Effects of Antibacterial Compounds in Green Tea Flavor against Streptococcus mutans. J. Agric. Food Chem. 41: 1102-1105. |
| Antiinflammatory | |
| Antiproliferant | |
| Antiseptic | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Cicatrizant ED50=240 ug/g mus | |
| FLavor FEMA 5-40 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Insecticide 1.29 uM/fly | |
| Interleukin-6-Inhibitor | |
| Mosquitofuge > Deet | |
| Motor-Depressant | Buchbauer et al, e.g.Buchbauer et al,1993.Therapeutic properties of essential oils and fragrances. Chap.12 in Teranishi,R, Buttery,R.G and Sugisawa,H. Eds. Bioactive Volatile Compounds from Plants. ACS Symposium Series 525. Amer. Chem. Soc., Washington DC |
| Nematicide MLC=1 mg/ml | Shoyakugaku Zasshi, 44: 183. |
| Perfumery | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Pesticide | |
| Sedative | Buchbauer et al, e.g.Buchbauer et al,1993.Therapeutic properties of essential oils and fragrances. Chap.12 in Teranishi,R, Buttery,R.G and Sugisawa,H. Eds. Bioactive Volatile Compounds from Plants. ACS Symposium Series 525. Amer. Chem. Soc., Washington DC |
| Termiticide IC100=5 mg/g | |
| Transdermal | |
| Vulnerary ED50=240 ug/g mus | |

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|---------------|-------|-------|-------|-------|--|
| ALPHA-THUJENE | Plant | 220.0 | 720.0 | -0.12 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
|---------------|-------|-------|-------|-------|--|

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|-------------|-------|------|-------|------|--|
| BETA-PINENE | Plant | 10.0 | 990.0 | 0.63 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
|-------------|-------|------|-------|------|--|

Activities (13)

| | |
|------------------|---|
| Allergenic | |
| Antiinflammatory | |
| Antiseptic | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| Antispasmodic | |

| | |
|--------------------|--|
| FLavor FEMA 15-600 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Herbicide | Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp. |
| Insectifuge | Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990. |
| Irritant | Zebovitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253. |
| Perfumery | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Pesticide | |
| Spasmogenic | Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp. |
| Transdermal | |

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|----------------|-------|------|--------|-----|---|
| BORNYL-ACETATE | Plant | 30.0 | 3399.0 | 1.7 | * |
|----------------|-------|------|--------|-----|---|

Activities (12)

| | |
|-------------------------------|---|
| (-)Chronotropic 933 nMl | Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin. |
| (-)Inotropic 933 nMl | Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin. |
| Antibacterial | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| Antifeedant | Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990. |
| Antispasmodic ED50=0.09 mg/ml | Fitoterapia No.59-1984. |
| Antiviral | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| Expectorant | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| FLavor FEMA 70-80 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Insectifuge | Blaschek, W., Hansel, R., Keller, K., Reichling, J., Rimpler, H., and Schneider, G. eds. 1998. Hager's Handbuch der Pharmazeutischen Praxis, Auflage Band 2 (A-K), 909 pp., (L-Z), 858 pp. Springer-Verlag, Berlin. |
| Myorelaxant | Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp. |
| Pesticide | |
| Sedative | |

| | | | | | |
|------------|-------|------|--------|------|---|
| CAMPHENENE | Plant | 10.0 | 1080.0 | 1.24 | * |
|------------|-------|------|--------|------|---|

Activities (9)

| | |
|----------------------|---|
| Allelopathic | Wright,C.W.(Ed)2002.Medicinal&Aromatic Plants-Industrial Profiles.Artemisia.344pp.Maffei,M.(Ed)2002.Vetiveria.The Genus Vetiveria.Taylor&Francis.NY,NY.191pp.Southwell,I.,Lowe,R.(Eds)1999.Tea Tree.The Genus Melaleuca.Harwood Acad.Pub.Amsterdam,Netherlands. |
| Antilithic? | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Antioxidant | Jim Duke's personal files. |
| Expectorant | Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin. |
| FLavor FEMA 15-175 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Hypocholesterolemic? | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Insectifuge | Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990. |
| Pesticide | |
| Spasmogenic | Fitoterapia No.59-1984. |

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|-----------|-------|--------|---------|------|--|
| CARVACROL | Plant | 4169.0 | 12507.0 | 0.86 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
|-----------|-------|--------|---------|------|--|

Activities (37)

| | |
|----------------------------------|---|
| Allergenic | |
| Anesthetic | |
| Anthelmintic | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Antialzheimeran? | L. Gracza (1985) as cited by Buchbauer re antiacetylcholinesterase. |
| Antiatherosclerotic IC50=5.53 uM | |
| Antibacterial MIC 170-290 | Chalchat, J.C. et Garry, R.P.* , Bastide, P., Fabre, F. et Malhuret, R. Correlation Composition Chimique/Activite Antimicrobienne: V - Contribution a la Comparaison de 2 Methodes de Determination Des Cmi. Plantes medicinales et phytotherapie, 25: 184-193. |
| Antibacterial MIC=39-625 | Russell, G. B., Phytochemical resources for crop protection, N. Z. J. Technol., 2, 1986, 127-134. |
| Anticholinesterase? | L. Gracza (1985) as cited by Buchbauer re antiacetylcholinesterase. |
| Antidiuretic | Lawrence Review of Natural Products, Mar-92. |
| Antiinflammatory IC50=4 uM | |
| Antimelanomic IC50=120 uM/l | |
| Antioxidant | Jimenez, J., Navarro, M.C., Montilla, M.P., Martin, A. and Martinez, A. 1993. Thymus zygis Oil: Its Effects on CCl4-Induced Hepatotoxicity and Free Radical Scavenger Activity. JEOP: 153-8. |
| Antioxidant (LDL) IC50=5.53 uM | |
| Antiplateau MIC=39-625 ug/ml | Osawa, K., Matsumoto, T., Maruyama, T., Takiguchi, T., Okuda, K., and Takazoe, I. Studies of the antibacterial activity of plant extracts and their constituents against periodontopathic bacteria, Bull Tokyo Dent. Coll., 31 (1), 1990, 17-21 |
| Antiprostaglandin | |

| | |
|---------------------------------|--|
| tnymoi | Scavenger Activity. JEUS: 153-8. |
| Antiseptic 1.5 x phenol | |
| Antispasmodic | |
| Antistaphylococcal | |
| Antistreptococcal | |
| Antitussive | Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. <i>Herbal Medicine - A Guide for Health-care Professionals</i> . The Pharmaceutical Press, London. 296pp. |
| Candidicide MIC<0.1 ug/ml | |
| Candidicide 100-150 ug/ml | |
| Carminative | Leung, A. Y. and Foster, S. 1995. <i>Encyclopedia of Common Natural Ingredients</i> 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| Cyclooxygenase-Inhibitor #NAME? | |
| Enterorelaxant | J. Aromatherapy 4: 22. |
| Expectorant | Leung, A. Y. and Foster, S. 1995. <i>Encyclopedia of Common Natural Ingredients</i> 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| FLavor FEMA 10-125 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Fungicide | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp. |
| Insectifuge | |
| Irritant | Leung, A. Y. and Foster, S. 1995. <i>Encyclopedia of Common Natural Ingredients</i> 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| Nematicide MLC=1 mg/ml | |
| Pesticide | |
| Prostaglandin-Inhibitor | |
| Tracheorelaxant | |
| Trichomonicide LD100=150 ug/ml | |
| Vermifuge | |

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|-----------------------|-------|------|--------|------|--|
| DIHYDROCARVYL-ACETATE | Plant | 32.0 | 4518.0 | 1.73 | Lawrence, B.M., <i>Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980</i> . |
|-----------------------|-------|------|--------|------|--|

Activities (1)

FLavor FEMA 5-500 Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry

| | | | | | |
|--------------|---------------|---------|----------|------|---|
| EO | Plant | 10000.0 | 30000.0 | 1.54 | * |
| FAT | Seed | -- | 313000.0 | 0.25 | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses |
| FORMALDEHYDE | Essential Oil | -- | -- | | List, P.H. and Horhammer, L. <i>Hager's Handbuch der Pharmazeutischen Praxis</i> , Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |

Activities (12)

| | |
|--------------|-------------------|
| Allergenic | |
| Anesthetic | Martindale's 29th |
| Anticystitic | Martindale's 29th |
| Antiplantar | Martindale's 29th |
| Antiseptic | Martindale's 29th |
| Antiviral | Martindale's 29th |
| Fungicide | Martindale's 29th |
| Irritant | Martindale's 29th |
| Mutagenic | Martindale's 29th |
| Neoplastic | Martindale's 29th |
| Pesticide | |
| Scolicide | Martindale's 29th |

| | | | | | |
|-----------------|-------|------|--------|------|--|
| GAMMA-TERPINENE | Plant | 11.0 | 5610.0 | 1.75 | Lawrence, B.M., <i>Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980</i> . |
|-----------------|-------|------|--------|------|--|

Activities (11)

ACE-Inhibitor 100 ug/ml (weak activity)

Acaricide

Aldose-Reductase-Inhibitor 100 ug/ml Okamura, K., Iwakami, S., Matsunaga, T. 1992. Biological Activity of Monoterpene from Trees. Toyama-Ken Yakuji Kenkyusho Nenpo, (20): 95-101.

Antiacetylcholinesterase IC23=1.2 mM

Blaschek, W., Hansel, R., Keller, K., Reichling, J., Rimpler, H., and Schneider, G. eds. 1998. *Hager's Handbuch der Pharmazeutischen Praxis*, Auflage Band 2 (A-K), 909 pp., (L-Z), 858 pp. Springer-Verlag, Berlin.

Antifeedant

Jim Duke's personal files.

FLavor FEMA 1-40

Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry

Insectifuge

Blaschek, W., Hansel, R., Keller, K., Reichling, J., Rimpler, H., and Schneider, G. eds. 1998. *Hager's Handbuch der Pharmazeutischen Praxis*, Auflage Band 2 (A-K), 909 pp., (L-Z), 858 pp. Springer-Verlag, Berlin.

| | | | | | |
|-----------------|---------------|--------|--------|-------|--|
| GERANYL-FORMATE | Plant | 1020.0 | 3060.0 | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| HEPTANAL | Essential Oil | 480.0 | 1440.0 | 1.0 | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| ISOMENTHONE | Plant | 24.0 | 243.0 | -0.64 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |

Activities (3)

Antiacyetylcholinesterase IC50=1.6 mM

Antioxidant

Antiradicular

| | | | | | |
|------------------|-------|----|----|--|--|
| ISOVALERALDEHYDE | Plant | -- | -- | | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
|------------------|-------|----|----|--|--|

Activities (1)

FLavor FEMA 0.5-5 Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry

| | | | | | |
|----------|-------|------|--------|------|--|
| LIMONENE | Plant | 50.0 | 2874.0 | 1.28 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
|----------|-------|------|--------|------|--|

Activities (60)

| | | | | | |
|--|--|--|--|--|--|
| AChE-Inhibitor | | | | | Grundy, D. L. and Still, C. C., Inhibition of acetylcholinesterases by pulegone-1,2-epoxide, Oest. Biochem. & Physiol., 23, 1985, 383-8. |
| Acaricide LC100=8 uM | | | | | |
| Allelochemical | | | | | |
| Allergenic 1/20th carene | | | | | |
| Antiacyetylcholinesterase IC22-26=1.2 mM | | | | | |
| Antiadenomic | | | | | |
| Antialzheimeran? | | | | | Grundy, D. L. and Still, C. C., Inhibition of acetylcholinesterases by pulegone-1,2-epoxide, Oest. Biochem. & Physiol., 23, 1985, 383-8. |
| Antiasthmatic | | | | | |
| Antibacterial | | | | | Revista Itiliana Eppos, 12: 5, 1994. |
| Anticancer | | | | | |
| Antiesophagitic | | | | | |
| Antifeedant | | | | | |
| Antiflu | | | | | Economic & Medicinal Plant Research, 5: 195. |
| Antiinflammatory | | | | | |
| Antilithic | | | | | |
| Antilymphomtic | | | | | |
| Antimetastatic (Stomach) | | | | | |
| Antimutagenic | | | | | Economic & Medicinal Plant Research, 6: 235. |
| Antiobesity | | | | | |
| Antiseptic | | | | | |
| Antispasmodic ED50=0.197 mg/ml | | | | | Fitoterapia No.59-1984. |
| Antitumor | | | | | |
| Antitumor (Breast) | | | | | |
| Antitumor (Colon) | | | | | |
| Antitumor (Pancreas) | | | | | |
| Antitumor (Prostate) | | | | | |
| Antitumor (Stomach) | | | | | |
| Antiviral | | | | | |
| Apoptotic | | | | | |
| Bronchoprotectant | | | | | |
| Cancer-Preventive | | | | | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Candidstat | | | | | |
| Chemopreventive | | | | | |
| Cholesterolytic | | | | | |
| Detoxicant | | | | | |
| Enterococontractant | | | | | J. Aromatherapy 4: 22. |
| Expectorant | | | | | |
| FLavor | | | | | |
| Fungiphilic | | | | | J. Agric. Food Chem. 43: 2283. |
| Fungistat | | | | | |
| GST-Inducer | | | | | |
| Herbicide IC50=45 uM | | | | | Keeler R F and Tiu A T eds 1991 Toxicology of Plant and Fungal Compounds (Handbook of Natural Toxins Vol 6) Marcel |

| | | | | | |
|---|--|--|--|--|--|
| Histaminic | | | | | |
| Immunomodulator | | | | | |
| Insecticide 0.37 uM/fly | | | | | Jacobson, M., <i>Glossary of Plant-Derived Insect Deterrents</i> , CRC Press, Inc., Boca Raton, FL, 213 p, 1990. |
| Insectifuge | | | | | |
| Interleukin-6-Inhibitor | | | | | |
| Irritant | | | | | |
| Lipolytic | | | | | |
| Myorelaxant 50 mg/kg | | | | | |
| NO-Genic | | | | | |
| Nematicide IC=100 ug/ml | | | | | Nigg, H.N. and Seigler, D.S., eds. 1992. <i>Phytochemical Resources for Medicine and Agriculture</i> . Plenum Press, New York. 445 pp. |
| Ornithine-Decarboxylase-Inhibitor ~750 mg/kg (diet) | | | | | |
| Ozone-Scavenger | | | | | |
| P450-Inducer | | | | | |
| Peristaltic | | | | | |
| Pesticide | | | | | |
| Photosensitizer | | | | | Rinzler, C. A. 1990. <i>The Complete Book of Herbs, Spices and Condiments</i> . Facts on File, New York. 199 pp. |
| Sedative ED=1-32 mg/kg | | | | | Wagner & Wolff, eds. 1977. <i>New Natural Products</i> (RS164. I56. 176) |
| Transdermal | | | | | |

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|-----------------|-------|------|-------|------|--|
| LINALOL | Plant | -- | -- | | Lawrence, B.M., <i>Essential Oils 1976-1977</i> , <i>Essential Oils 1978</i> , <i>Essential Oils 1979-1980</i> . |
| LINALYL-ACETATE | Plant | 49.0 | 378.0 | -0.4 | Lawrence, B.M., <i>Essential Oils 1976-1977</i> , <i>Essential Oils 1978</i> , <i>Essential Oils 1979-1980</i> . |

Activities (7)

| | | | | | |
|-------------------------------|--|--|--|--|--|
| Anesthetic 0.01-1 ug/ml | | | | | |
| Antioxidant 400 ppm | | | | | |
| Antispasmodic ED50=0.21 mg/ml | Fitoterapia No.59-1984. | | | | |
| FLavor FEMA 2-15 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry | | | | |
| Motor-Depressant | Buchbauer et al, e.g.Buchbauer et al,1993.Theapeutic properties of essential oils and fragrances. Chap.12 in Teranishi,R, Buttery,R.G and Sugisawa,H. Eds. <i>Bioactive Volatile Compounds from Plants</i> . ACS Symposium Series 525. Amer. Chem. Soc., Washington DC | | | | |
| Perfumery | Merck 11th Edition | | | | |
| Sedative | | | | | |

| | | | | | |
|---------------|------|----|----|--|--|
| LINOLEIC-ACID | Seed | -- | -- | | List, P.H. and Horhammer, L., <i>Hager's Handbuch der Pharmazeutischen Praxis</i> , Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
|---------------|------|----|----|--|--|

Activities (27)

| | | | | | |
|-------------------------------|--|--|--|--|--|
| 5-Alpha-Reductase-Inhibitor | | | | | |
| AntiMS | Economic & Medicinal Plant Research, 6: 189. | | | | |
| Antiacne | | | | | |
| Antialopelcic | | | | | |
| Antianaphylactic | Economic & Medicinal Plant Research, 6: 189. | | | | |
| Antiandrogenic | | | | | |
| Antiarteriosclerotic | | | | | |
| Antiarthritic | Economic & Medicinal Plant Research, 6: 189. | | | | |
| Anticorony | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp. | | | | |
| Antieczemic | Economic & Medicinal Plant Research, 6: 189. | | | | |
| Antifibrinolytic | Economic & Medicinal Plant Research, 1: 53. | | | | |
| Antigranular | | | | | |
| Antihistaminic | Economic & Medicinal Plant Research, 6: 189. | | | | |
| Antiinflammatory IC50=31 uM | | | | | |
| Antileukotriene-D4 IC50=31 uM | | | | | |
| Antimenorrhagic | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf). | | | | |
| Antiprostatic | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf). | | | | |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. | | | | |
| Carcinogenic | Science News, 146: 421. | | | | |
| Comedolytic | | | | | |
| Hepatoprotective | | | | | |
| Hypocholesterolemic | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. <i>CRC Handbook of Lipids in Human Nutrition</i> . CRC Press. Boca Raton, FL. 233 pp.) | | | | |
| Immunomodulator | Economic & Medicinal Plant Research, 6: 189. | | | | |
| Insectifuge | Jacobson, M., <i>Glossary of Plant-Derived Insect Deterrents</i> , CRC Press, Inc., Boca Raton, FL, 213 p, 1990. | | | | |
| Metastatic | Science News, 146: 421. | | | | |
| Nematicide | Nigg, H.N. and Seigler, D.S., eds. 1992. <i>Phytochemical Resources for Medicine and Agriculture</i> . Plenum Press, New York. 445 pp. | | | | |

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|--------------------------------------|--|------|--------|---|--|
| LINOLENIC-ACID | Seed | -- | -- | List, P.H. and Horhammer, L, Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. | |
| NERAL | Plant | -- | -- | List, P.H. and Horhammer, L, Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. | |
| Activities (4) | | | | | |
| Antibacterial | Iwu, M.M. 1993. Handbook of African Medicinal Plants. CRC Press, Boca Raton, FL 435 pp. | | | | |
| Antispasmodic | | | | | |
| Pesticide | | | | | |
| Termiteicide LD100=5 mg/g | | | | | |
| NERYL-FORMATE | Plant | -- | -- | List, P.H. and Horhammer, L, Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. | |
| NONANAL | Plant | -- | -- | List, P.H. and Horhammer, L, Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. | |
| NONYL-ACETATE | Plant | -- | -- | List, P.H. and Horhammer, L, Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. | |
| OLEIC-ACID | Seed | -- | -- | List, P.H. and Horhammer, L, Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. | |
| Activities (18) | | | | | |
| 5-Alpha-Reductase-Inhibitor | | | | | |
| Allergenic | | | | | |
| Alpha-Reductase-Inhibitor | | | | | |
| Anemiagenic | | | | | |
| Antialopecic | | | | | |
| Antiandrogenic | | | | | |
| Antiinflammatory IC50=21 uM | | | | | |
| Antileukotriene-D4 IC50=21 uM | | | | | |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. | | | | |
| Choleretic 5 ml/man | | | | | |
| Dermatitogenic | | | | | |
| FLavor FEMA 1-30 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry | | | | |
| Hypocholesterolemic | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.) | | | | |
| Insectifuge | Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990. | | | | |
| Irritant | Merck 11th Edition | | | | |
| Percutaneostimulant | Seki, T, Toeda, C, Kawaguchi, T, Junii, K, Sugabayashi, K, and Morimoto, Y. 1990. Enhanced Transdermal Delivery of Zidovudine in Rats and Human Skin. <i>Chem. Pharm. Bull.</i> 38(11): 3086-3089, 1990. | | | | |
| Perfumery | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry | | | | |
| Propecic | | | | | |
| P-CYMENE | Plant | 65.0 | 3384.0 | 0.46 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| Activities (16) | | | | | |
| Analgesic | Martindale's 28th | | | | |
| Antiacetylcholinesterase IC40=1.2 mM | | | | | |
| Antibacillary | | | | | |
| Antibacterial | | | | | |
| Antiflu | | | | | |
| Antirheumatalgic | Martindale's 28th | | | | |
| Antiviral | | | | | |
| FLavor FEMA 12-250 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry | | | | |
| Fungicide | Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp. | | | | |
| Herbicide IC50=50 uM | Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp. | | | | |
| Insectifuge | Blaschek, W., Hansel, R., Keller, K., Reichling, J., Rimpler, H., and Schneider, G. eds. 1998. Hager's Handbuch der Pharmazeutischen Praxis, Auflage Band 2 (A-K), 909 pp., (L-Z), 858 pp. Springer-Verlag, Berlin. | | | | |
| Irritant | Zebowitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253. | | | | |
| Laxative | Zebowitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253. | | | | |
| Pesticide | | | | | |
| Sedative | Zebowitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253. | | | | |
| Trichomonicide LD100=50 ug/ml | | | | | |

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|--|---|------|----------|-------|--|
| PROTEIN | Seed | -- | 213000.0 | -0.18 | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses |
| PULEGONE | Plant | 10.0 | 267.0 | -0.61 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| Activities (28) | | | | | |
| AChE-Inhibitor | Grundy, D. L. and Still, C. C., Inhibition of acetylcholinesterases by pulegone-1,2-epoxide, <i>Oest. Biochem. & Physiol.</i> , 23, 1985, 383-8. | | | | |
| Antiacytcholinesterase IC50=0.9 mM | | | | | |
| Antiacytcholinesterase IC50=136 ug/ml | | | | | |
| Antialzheimeran? | Grundy, D. L. and Still, C. C., Inhibition of acetylcholinesterases by pulegone-1,2-epoxide, <i>Oest. Biochem. & Physiol.</i> , 23, 1985, 383-8. | | | | |
| Antibacterial | Economou, D., and Nahrstedt, A. 1991. Chemical, Physiological, and Toxicological Aspects of the Essential Oil of Some Species of the Genus <i>Bystropogon</i> *. <i>Planta Medica</i> , 57: 347, 1991. | | | | |
| Anticholinesterase | Grundy, D. L. and Still, C. C., Inhibition of acetylcholinesterases by pulegone-1,2-epoxide, <i>Oest. Biochem. & Physiol.</i> , 23, 1985, 383-8. | | | | |
| Antihistaminic | Ortiz De Urbina, A.V., Martin, M.L., Montero, M.J., Carron, R., Sevilla, M.A., San Roman, L. 1989. Antihistaminic activity of pulegone on the guinea-pig ileum. <i>J. Pharm. Pharmacol.</i> 42: 295-296, 1990. | | | | |
| Antipyretic | | | | | |
| Avifuge | | | | | |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. | | | | |
| Candidicide | Economou, D., and Nahrstedt, A. 1991. Chemical, Physiological, and Toxicological Aspects of the Essential Oil of Some Species of the Genus <i>Bystropogon</i> *. <i>Planta Medica</i> , 57: 347, 1991. | | | | |
| Cerebrotoxic orl man | J. Aromatherapy 4: 24. | | | | |
| Encephalopathic 80 mg/kg orl rat | Lawrence Review of Natural Products, Jan-92. | | | | |
| F lavor FEMA 5-30 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry | | | | |
| Fungicide | Economou, D., and Nahrstedt, A. 1991. Chemical, Physiological, and Toxicological Aspects of the Essential Oil of Some Species of the Genus <i>Bystropogon</i> *. <i>Planta Medica</i> , 57: 347, 1991. | | | | |
| Glutathionalytic | Lawrence Review of Natural Products, Jan-92. | | | | |
| Hallucinogenic | R.J. Huxtable (Huxtable, R.J. (as T. Max). 1992. This and That: The Essential Pharmacology of Herbs and Spices. Tips 13:15-20 Huxtable, R.J. 1992b. The Myth of Benfice Nature. The Risk of Herbal Preparations. <i>Anns. Intern. Med.</i> 117(2):165-6; Huxtable, R. | | | | |
| Hepatotoxic | Lewis, E.J. and Friedrich, E.C. 1989. The Essential Oil of Poliomimtha incana. <i>Planta Medica</i> 56(2): 224-226, 1990. | | | | |
| Herbicide IC50=1.5 uM | Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp. | | | | |
| Insecticide | Grundy, D. L. and Still, C. C., Inhibition of acetylcholinesterases by pulegone-1,2-epoxide, <i>Oest. Biochem. & Physiol.</i> , 23, 1985, 383-8. | | | | |
| Insectifuge | | | | | |
| Nephrotoxic | R.J. Huxtable (Huxtable, R.J. (as T. Max). 1992. This and That: The Essential Pharmacology of Herbs and Spices. Tips 13:15-20 Huxtable, R.J. 1992b. The Myth of Benfice Nature. The Risk of Herbal Preparations. <i>Anns. Intern. Med.</i> 117(2):165-6; Huxtable, R. | | | | |
| Neurotoxic | | | | | |
| Perfumery | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry | | | | |
| Pesticide | | | | | |
| Pulifuge | | | | | |
| Pulmonotoxic | | | | | |
| Sedative | | | | | |
| SABINENE | Plant | -- | -- | | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| Activities (5) | | | | | |
| Antibacterial | | | | | |
| Antihelicobacter | | | | | |
| Antiseptic | | | | | |
| Antilulcer | | | | | |
| Perfumery | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry | | | | |
| TERPINEN-4-OL | Plant | 40.0 | 150.0 | -0.22 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| Activities (23) | | | | | |
| Allelopathic | Wright,C.W.(Ed)2002,Medicinal&Aromatic Plants-Industrial Profiles <i>Artemisia</i> .344pp.Maffei,M.(Ed)2002, <i>Vetiveria</i> .The Genus <i>Vetiveria</i> .Taylor&Francis.NY,NY.191pp.Southwell,I.,Lowe,R.(Eds)1999. <i>Tea Tree</i> .The Genus <i>Melaleuca</i> .Harwood Acad.Pub.Amsterdam,Netherlands. | | | | |
| Antiacytcholinesterase IC21-24=1.2 mM | | | | | |
| Antiacne | | | | | |
| Antiallergic | | | | | |
| Antiasthmatic | Chin. J. Tuber. Respir. Dis., 4:203, 1982. | | | | |
| Antibacterial | | | | | |
| Antioxidant | | | | | |
| Antiseptic | Flav. & Frag. J. 9: 129. | | | | |
| Antispasmodic | | | | | |
| Antitussive | Chin. J. Tuber. Respir. Dis. | | | | |
| Antilulcer | | | | | |
| Bacteriostatic | Chin. J. Tuber. Respir. Dis. | | | | |
| Diuretic 0.1 ml/rat | | | | | |
| Fungicide | | | | | |
| Herbicide IC50=200 mM | Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, <i>Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology</i> , v.4, Oryx Press, Phoenix, 1989, 267pp. | | | | |

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|------------------------|--|--|--|--|--|
| Insectifuge | | | | | |
| Irritant | Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. <i>Herbal Medicine - A Guide for Health-care Professionals</i> . The Pharmaceutical Press, London. 296pp. | | | | |
| Nematicide MLC=1 mg/ml | Shoyakugaku Zasshi, 44: 183. | | | | |
| Pesticide | | | | | |
| Renoirritant | Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. <i>Herbal Medicine - A Guide for Health-care Professionals</i> . The Pharmaceutical Press, London. 296pp. | | | | |
| Spermicide ED100=0.015 | | | | | |
| Vulnerary | Lawrence Review of Natural Products, Jan-91. | | | | |

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|--------|-------|--------|---------|------|---|
| THYMOL | Plant | 2000.0 | 27633.0 | 2.84 | * |
|--------|-------|--------|---------|------|---|

Activities (71)

| | | | | | |
|--|--|--|--|--|--|
| Acaricide | | | | | |
| Allergenic | | | | | |
| Analgesic | Madaus, G. 1976. <i>Lehrbuch der Biologischen Hilfsmittel</i> . Vol. 1-3. 2862 pp. (+ 144 p. index). Georg Olms Verlag, Hildesheim. Reprint of 1938 Madaus. | | | | |
| Ancylostomicide | Madaus, G. 1976. <i>Lehrbuch der Biologischen Hilfsmittel</i> . Vol. 1-3. 2862 pp. (+ 144 p. index). Georg Olms Verlag, Hildesheim. Reprint of 1938 Madaus. | | | | |
| Anesthetic | Madaus, G. 1976. <i>Lehrbuch der Biologischen Hilfsmittel</i> . Vol. 1-3. 2862 pp. (+ 144 p. index). Georg Olms Verlag, Hildesheim. Reprint of 1938 Madaus. | | | | |
| Ankylostomacide | Madaus, G. 1976. <i>Lehrbuch der Biologischen Hilfsmittel</i> . Vol. 1-3. 2862 pp. (+ 144 p. index). Georg Olms Verlag, Hildesheim. Reprint of 1938 Madaus. | | | | |
| Anthelmintic | Williamson, E. M. and Evans, F. J. <i>Potter's New Cyclopaedia of Botanical Drugs and Preparations</i> , Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989. | | | | |
| Antiacne | Nigg, H.N. and Seigler, D.S., eds. 1992. <i>Phytochemical Resources for Medicine and Agriculture</i> . Plenum Press, New York. 445 pp. | | | | |
| Antiaggregant IC50=0.75 | Tramil, 42: 511. | | | | |
| Antialzheimeran? | L. Gracza (1985) as cited by Buchbauer re antiacetylcholinesterase. | | | | |
| Antiarthritic | Madaus, G. 1976. <i>Lehrbuch der Biologischen Hilfsmittel</i> . Vol. 1-3. 2862 pp. (+ 144 p. index). Georg Olms Verlag, Hildesheim. Reprint of 1938 Madaus. | | | | |
| Antiatherosclerotic IC50=4 uM | | | | | |
| Antibacterial MIC=50-400 ug/ml | | | | | |
| Antibronchitic | Madaus, G. 1976. <i>Lehrbuch der Biologischen Hilfsmittel</i> . Vol. 1-3. 2862 pp. (+ 144 p. index). Georg Olms Verlag, Hildesheim. Reprint of 1938 Madaus. | | | | |
| Anticariogenic MIC=200-400 ug/ml | | | | | |
| Anticholinesterase | L. Gracza (1985) as cited by Buchbauer re antiacetylcholinesterase. | | | | |
| Antihalitosis | American Health, 12(4): 17, 1993. | | | | |
| Antiherpetic | Martindale's 28th | | | | |
| Antiinflammatory (=indomethacin) | | | | | |
| Antileptic | Madaus, G. 1976. <i>Lehrbuch der Biologischen Hilfsmittel</i> . Vol. 1-3. 2862 pp. (+ 144 p. index). Georg Olms Verlag, Hildesheim. Reprint of 1938 Madaus. | | | | |
| Antimelanomic IC50=120 uM/l | | | | | |
| Antineuritic | | | | | |
| Antioxidant 100 ppm | Martindale's 28th | | | | |
| Antioxidant (LDL) IC50=4 uM | | | | | |
| Antiperiodontic MIC=50-200 ug/ml | | | | | |
| Antiplaque MIC=39-625 ug/ml | Osawa, K., Matsumoto, T., Maruyama, T., Takiguchi, T., Okuda, K., and Takazoe, I. Studies of the antibacterial activity of plant extracts and their constituents against periodontopathic bacteria, Bull Tokyo Dent. Coll. 31 (1), 1990, 17-21 | | | | |
| Antiradicular EC=60 | Jimenez, J., Navarro, M.C., Montilla, M.P., Martin, A. and Martinez, A. 1993. Thymus zygis Oil: Its Effects on CCl4-Induced Hepatotoxicity and Free Radical Scavenger Activity. JEOP: 153-8. | | | | |
| Antirheumatic | Williamson, E. M. and Evans, F. J. <i>Potter's New Cyclopaedia of Botanical Drugs and Preparations</i> , Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989. | | | | |
| Antisalmonella | | | | | |
| Antiseptic 20 x phenol | Wagner & Wolff, eds. 1977. <i>New Natural Products</i> (RS164. I56. 176) | | | | |
| Antispasmodic | | | | | |
| Antistaphylococcc | | | | | |
| Antistreptococcc MIC=200-400 ug/ml | | | | | |
| Antitrichinosis 5% | Madaus, G. 1976. <i>Lehrbuch der Biologischen Hilfsmittel</i> . Vol. 1-3. 2862 pp. (+ 144 p. index). Georg Olms Verlag, Hildesheim. Reprint of 1938 Madaus. | | | | |
| Antitussive | Iwu, M.M. 1993. <i>Handbook of African Medicinal Plants</i> . CRC Press, Boca Raton, FL 435 pp. | | | | |
| Ataxigenic | Zebowitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. <i>Compendium of Safety Data Sheets for Research and Industrial Chemicals</i> . VCH Publishers, New York. 3560-4253. | | | | |
| Candidicide 100 ug/ml (>Nystatin) | | | | | |
| Carminative | Yamamoto, A., Umemori, S., and Muranishi, S. 1993. Absorption Enhancement of Intrapulmonary Administered Insulin by Various Absorption Enhancers and Protease Inhibitors in Rats. <i>J. Pharm. Pharmacol.</i> 46: 14-18, 1994. | | | | |
| Counterirritant | Nigg, H.N. and Seigler, D.S., eds. 1992. <i>Phytochemical Resources for Medicine and Agriculture</i> . Plenum Press, New York. 445 pp. | | | | |
| Culicide LC50=36-49 mg/l | | | | | |
| Cyclooxygenase-Inhibitor (=indomethacin) | | | | | |

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|--------------------------------|--|
| Deodorant | Martindale's 28th |
| Dermatitigenic | |
| Enterorelaxant | J. Aromatherapy 4: 22. |
| Enterotoxic | Wichtl, M. 1984. <i>Teedrogen. Ein Handbuch für Apotheker und Ärzte. Wissenschaftliche Verlagsgesellschaft mbH Stuttgart.</i> 393 pp. |
| Expectorant | Leung, A. Y. and Foster, S. 1995. <i>Encyclopedia of Common Natural Ingredients</i> 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| FLavor FEMA 2-100 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Fungicide | Merck 11th Edition |
| Gastroirritant | Martindale's 29th |
| Gram(+)icide MIC=200-400 ug/ml | |
| Gram(-)icide MIC=50-200 ug/ml | |
| Insecticide LC50=36-49 mg/l | |
| Insecticide 0.22 uM/fly | |
| Insectifuge | |
| Irritant | Leung, A. Y. and Foster, S. 1995. <i>Encyclopedia of Common Natural Ingredients</i> 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| Larvicide 10 ppm | Berenbaum, M. R., <i>The natives knew</i> , Chemtech, (May), 1990, 275-279. |
| Larvicide 58 ppm | |
| Larvicide LC50=36-49 mg/l | |
| Molluscicide | |
| Myorelaxant | J. Aromatherapy 4: 22. |
| Nematicide MLC=0.1 mg/ml | Shoyakugaku Zasshi, 44: 183. |
| Perfumery | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Pesticide | |
| Sedative | Zebovitz, T. C. Ed. 1989. Part VII. <i>Flavor and Fragrance Substances</i> , in Keith L. H. and Walters, D.B., eds. <i>Compendium of Safety Data Sheets for Research and Industrial Chemicals</i> . VCH Publishers, New York. 3560-4253. |
| Sprout-Inhibitor | Duke, J.A.. Personal Communication. |
| Tracheorelaxant | |
| Trichomonicide LD100=25 ug/ml | |
| Urinary-Antiseptic | Williamson, E. M. and Evans, F. J., <i>Potter's New Cyclopaedia of Botanical Drugs and Preparations</i> , Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, reprint 1989. |
| Varroacide | |
| Vermicide | Madaus, G. 1976. <i>Lehrbuch der Biologischen Hilfsmittel</i> . Vol. 1-3. 2862 pp. (+ 144 p. index). Georg Olms Verlag, Hildesheim. Reprint of 1938 Madaus. |

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|---------------------|---------------|----|----|---|
| THYMOL-METHYL-ETHER | Essential Oil | -- | -- | List, P.H. and Horhammer, L, Hager's <i>Handbuch der Pharmazeutischen Praxis</i> , Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| THYMOLHYDROQUINONE | Essential Oil | -- | -- | List, P.H. and Horhammer, L, Hager's <i>Handbuch der Pharmazeutischen Praxis</i> , Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| UNDECANAL | Plant | -- | -- | List, P.H. and Horhammer, L, Hager's <i>Handbuch der Pharmazeutischen Praxis</i> , Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |

Activities (2)

FLavor FEMA 1-60

Perfumery

Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry